## *Populus deltoides - Salix nigra* Forest

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| COMMON NAME | Eastern Cottonwood - Black Willow Forest |
| SYNONYM | Midwestern Cottonwood - Black Willow Forest |
| PHYSIOGNOMIC CLASS | Forest (I) |
| PHYSIOGNOMIC SUBCLASS | Deciduous forest (I.B) |
| PHYSIOGNOMIC GROUP | Cold-deciduous forest (I.B.2) |
| PHYSIOGNOMIC SUBGROUP | Natural/Semi-natural Cold-deciduous forest (I.B.2.N) |
| FORMATION | Temporarily flooded cold-deciduous forest (I.B.2.N.d) |
| ALLIANCE | POPULUS DELTOIDES TEMPORARILY FLOODED FOREST ALLIANCE |

CLASSIFICATION CONFIDENCE LEVEL 2

USFWS WETLAND SYSTEM Temporarily flooded cold-deciduous forest

CONCEPT SUMMARY

***Globally***

This cottonwood - black willow forest is characteristic of the fronts and banks of most major rivers and streams throughout the Central Forest Region, extending into the northern forest particularly within the Mississippi, Ohio, and Missouri River systems. It develops on bare, moist soil on recently formed sand bars, front-land ridges, and well-drained flats, along with *Salix interior, Eragrostis hypnoides, Leptochloa panicea ssp. brachiata (= Leptochloa filiformis), Lipocarpha micrantha (= Hemicarpha micrantha), Rumex maritimus, Potentilla paradoxa*, and *Bidens* spp. This natural community can also be found on abandoned fields and well-drained ridges in the first bottoms. Soils are formed in alluvium, are deep, medium-textured, and with adequate or excessive moisture available for vegetation during the growing season. The tree canopy is tall (to 30 m) and dominated by *Populus deltoides* and *Salix nigra*, although *Fraxinus pennsylvanica, Acer saccharinum, Acer negundo, Platanus occidentalis*, and *Ulmus americana* are also commonly encountered. Tree diversity is limited due to the dynamics of flooding and resultant deposition and scouring of sediments. The subcanopy is almost exclusively *Salix nigra*. The shrub layer is conspicuously absent in many parts of the range. Herbaceous growth can be thick and lush but is often patchy and sparse due to frequent inundation. Species most often encountered in the ground layer include *Carex* spp., *Leersia oryzoides, Bidens* spp., and Asteraceae spp.

RANGE

***Effigy Mounds National Monument***

***Globally***

This cottonwood - black willow forest is characteristic of the fronts and banks of most major rivers and streams throughout the Central Forest Region, extending into the northern forest particularly within the Mississippi, Ohio, and Missouri River systems, extending from Ohio west to Minnesota, southward to Oklahoma, and east to Kentucky. This community once occupied vast tracts of land along river fronts and floodplain depressions. Land clearing, ditching and draining for conversion to cropland, and logging have eliminated much of the presettlement stands of this natural community.

ENVIRONMENTAL DESCRIPTION

***Effigy Mounds National Monument***

***Globally***

This community is quick to colonize newly deposited substrates adjacent to rivers, lakes, streams, and in frequently flooded, low, wet depressions in floodplains. Dynamic substrate availability caused by frequent flooding encourages the establishment and maintenance of this community type.

MOST ABUNDANT SPECIES

***Effigy Mounds National Monument***

| Stratum | Species |
|---|---|

***Globally***

| Stratum | Species |
|---|---|
| TREE CANOPY | *Populus deltoides, Salix nigra* |
| TREE SUB-CANOPY | *Salix nigra* |
| GRAMINOID | *Carex typhina, Leersia oryzoides* |
| FORB | *Bidens aristosa, Spermacoce glabra, Symphyotrichum lanceolatum var lanceolatum, Symphyotrichum lateriflorum var lateriflorum* |

CHARACTERISTIC SPECIES

***Effigy Mounds National Monument***

***Globally***

VEGETATION DESCRIPTION

***Effigy Mounds National Monument***

Vegetation of this type was not characterized during this project. However, based on observations, species likely to occur include *Populus deltoides*, *Salix nigra*, *Acer saccharinum*, and *Fraxinus pennsylvanica*.

***Globally***

This community is dominated by broadleaf deciduous trees. Canopy closure is complete, or nearly so, with few shrubs and limited tree species found in the type. The tree canopy is tall (to 30 m) and dominated by *Populus deltoides* and *Salix nigra*, although *Fraxinus pennsylvanica, Acer saccharinum, Acer negundo, Platanus occidentalis*, and *Ulmus americana* are also commonly encountered. Tree diversity is limited due to the dynamics of flooding and deposition/scouring of sediments. The subcanopy is almost exclusively *Salix nigra*. The shrub layer is conspicuously absent in many parts of the range. Herbaceous growth can be thick and lush but is often patchy and sparse due to frequent inundation. Species most often encountered in the ground layer include *Carex* spp., *Leersia oryzoides, Bidens* spp., and Asteraceae spp. (TNC 1995a).

Species composition is uniform throughout the range of this community. Species density is governed by the duration and depth of flooding. The more stable sites display very large cottonwood trees with lush understory and herbaceous layers. Sites frequently affected by flooding exhibit dense even-aged stands of cottonwood and willow. This forest often has considerable deposits of woody debris and high tree mortality.

OTHER NOTEWORTHY SPECIES

CONSERVATION RANK G3G4. The current range of this community is much smaller than the presettlement range due to extensive logging, ditching, draining, and land clearing for conversion to croplands. The reduced water flows and channelization of rivers decreases the frequency of natural floods necessary for the scouring and deposition of new substrates that favor cottonwood regeneration.

DATABASE CODE CEGL002018

COMMENTS

***Effigy Mounds National Monument***

***Globally***

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